

## REMARKS

By the above amendment, independent claims 1 and 21 have been amended to incorporate the features of dependent claims 20 and 26, respectively, therein, with the previous dependent claims 20 and 26 being canceled. Additionally, by the present amendment new dependent claims 27 and 28 have been presented which depend from claims 1 and 21, respectively, and recite further features of the present invention, as will be discussed below.

The rejection of claims 1, 4 - 8, 13, 15 and 17 under 35 USC 103(a) as being unpatentable over Morosawa et al (JP 06-132306) and the rejection of claims 11 - 12, 16 and 20 - 26 under 35 USC 103(a) as being unpatentable over Morosawa, further in view of Baek (US 6,657,689), such rejections are traversed insofar as they are applicable to the present claims and reconsideration and withdrawal of the rejections are respectfully requested.

As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under '103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and

choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Before discussing the cited art, applicants note that each of independent claims 1 and 21 have been amended to incorporate the features of dependent claims 20 and 26, respectively, therein, which recite the feature that the silicon nitride film and the silicon oxide film are configured so as to reduce reflection light from a transmissive region of the liquid crystal display device. Furthermore, new dependent claims 27 and 28 have been presented, which recite the feature that the film thickness of the silicon nitride film has a thickness value which minimizes reflection light from the transmissive region of the liquid crystal display device. Referring to the drawings of this application, applicants note that Figs. 1 - 3 illustrate a structural

arrangement of a liquid crystal device in accordance with the present invention, wherein a first background film 9 is formed on the substrate 8 and a second background film 10 is formed on the first background film 9. As described at page 12, lines 15 - 25 of the specification, a silicon nitride film is used as the first background film 9 and a silicon oxide film is formed at the second background film 10. Fig. 4 of the drawings shows a specific example of materials, thicknesses of respective films or layers, and the refractive indices, when the wavelength is 555nm. As described in the specification at page 18, lines 16 and 17, the first background film is formed so as to be thicker than the second background film, and as described at page 19, lines 22 - 25 of the specification, according to the present invention by selection of the film thickness, the reflection of external light in the transmissive region can be suppressed, whereby it is possible to provide a liquid crystal display device in which the contrast is enhanced. More particularly, Fig. 5 is a graph showing the spectral luminescence reflectance in which the film thickness of the first background film, i.e., the silicon nitride film, is changed within a range of 50 nm to 180 nm, and as illustrated therein, the spectral luminescence reflectance is minimized when the film thickness of the background film of silicon nitride is set to 140 nm. As is apparent, from Fig. 5, the reflection light from a transmissive region of the liquid crystal display device is reduced, at least when the silicon nitride film has a thickness which falls within a range of 118 nm to 169 nm, for example, as recited in independent claim 21. Thus, independent claims 1 and 21, as amended, recite the feature of the relationship of the silicon nitride film and the silicon oxide film in a liquid crystal display device which reduces reflection light from a transmissive region of the liquid crystal display device, and as described in the specification of this application enables enhancement of the contrast. Applicants submit that such

features, as recited in the independent and dependent claims of this application, are not disclosed or taught in the cited art as will become clear from the following discussion.

In applying Morosawa et al to the claimed invention, the Examiner contends that Morosawa et al discloses a silicon oxide film having a thickness of 1000Å and a silicon nitride film having a thickness of 1000 to 4000Å which overlaps applicants range of film thickness for the silicon nitride film for advantages such as achieving excellent quality for the silicon film. As is apparent, Morosawa et al fails to provide any disclosure of teaching of the relationship of film thickness of the silicon nitride film to the light reflection capabilities of the transmissive region of the liquid crystal display device, recognizing that Morosawa et al is directed to manufacture of the semiconductor device and not to a liquid crystal display device. As is apparent, while Morosawa shows a large range of film thickness, the range includes film thickness values which provide for increased reflection light from a transmissive region of the liquid crystal display device, rather than reducing reflection light, as recited in independent claims 1 and 21, and the dependent claims thereof. Thus, applicants submit that Morosawa et al fails to disclose or teach in the sense of 35 USC 103 the recited features of claims 1 and 21, that the silicon nitride film and the silicon oxide film are configured so as to reduce reflection light from a transmissive region of the liquid crystal display device, nor the specific ranges as recited in the claims, which enable reduction of reflection light or the provision of a film thickness for the silicon nitride film which minimizes reflection light, as recited in the claims of this application. Accordingly, applicants submit that all claims patentably distinguish over Morosawa et al in the sense of 35 USC 103 and should be considered allowable thereof.

As to the combination of Morosawa et al with Baek et al, the Examiner recognizes that Morosawa et al is not directed to a liquid crystal display device having a transmissive region and suggests that it would be obvious to combine the liquid crystal display device of Baek et al with the disclosure of Morosawa et al. Applicants submit that the Examiner has engaged in a hindsight reconstruction attempt, which is contrary to the disclosure of the individual references, and which does not provide the recited arrangement which reduces reflection light from a transmissive region of the liquid crystal display device. See, In re Fine, supra. Since Baek et al, like Morosawa et al, provides no disclosure or teaching concerning the problem of reflection light from a transmissive region of the liquid crystal display device that the configuration of the silicon nitride film and the silicon oxide film enable reduction of such reflection light, in film thickness ranges which enable reduction of the reflection light, as claimed. Thus, applicants submit that all claims patentably distinguish over this proposed combination of references in the sense of 35 USC 103 and all claims should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims present in this application should now be in condition for allowance and issuance of an action of favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli,

Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 501.42964X00),  
and please credit any excess fees to such deposit account.

Respectfully submitted,

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